

**INTERNATIONAL PRELIMINARY AUTHORITY (IPEA/US)**

In re International Application of:

Applicant: Thomas W. Wilson

Filed: 02 July 2002 (02.07.02)

PCT Application No.: PCT/US02/21225

Docket No.: WRL-004FOR

Title: METHOD AND SYSTEM FOR ANALYZING RESOURCE ALLOCATION

**Commissioner for Patents**

**Mail Stop PCT**

**P.O. Box 1450**

**Alexandria, Virginia 22313-1450**

**ATTN: IPEA/US**

**REPLY TRANSMITTAL**

Enclosed is a Reply in Response to Written Opinion filed under PCT Rule 66.

The following documents are enclosed herewith:

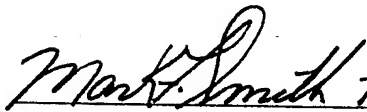
Reply (5 pages) and

Replacement Sheets of Claims (13 pages)

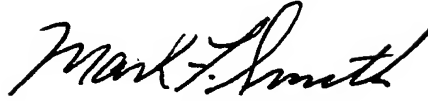
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**CERTIFICATION OF MAILING**

I hereby certify that this Reply Transmittal and all documents referred to as enclosed therein are being deposited with the United States Postal Service on this date July 23, 2003 in an envelope addressed to Commissioner for Patents, Mail Stop PCT, P.O. Box 1450, Alexandria, Virginia 22313-1450.

  
Mark F. Smith      7-23-03  
(Person Mailing Paper)      Date

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark F. Smith". The signature is fluid and cursive, with the first name "Mark" being more prominent.

Mark F. Smith  
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July 23, 2003

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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application of:

Applicant: Thomas Wilson

International Application No.: PCT/US02/21225

International Filing Date: July 2, 2002 (02.07.2002)

Docket: WRL-004PAT

Title: **METHOD AND SYSTEM FOR ANALYZING RESOURCE  
ALLOCATION**

Commissioner for Patents  
Mail Stop PCT  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Attn.: IPEA/US

Sir:

**REPLY IN RESPONSE TO WRITTEN OPINION  
DATED JUNE 4, 2003**

Pursuant to Article of the PCT and in response to the Written Opinion from the International Preliminary Examining Authority dated June 4, 2003, the Applicant have amended the claims of the subject PCT application as described more fully below to place the claims in proper form. The Applicant respectfully requests that this amendment and remarks be made of record.

In response to the Written Opinion, please substitute the enclosed replacement sheets 38 – 50 for the original sheets 38 – 48 in the above-identified application. Claims 1, 2, 11, 12 – 17, 26 – 34 have been amended to eliminate the acronyms. Specifically the claims have been amended as follows:

WRL-004PAT

Claims 31, 32 and 33, have been amended to make it more clear that UOA is defined as a "Unit of Analysis;"

Claims 1, 2, 11 – 16, and 26 – 34, have been amended to make it more clear that UOA-ID is defined as "Unit Of Analysis;"

Claims 1, 16, 17, and 31 – 34, have been amended to make it more clear that CCT is defined as a "Calendar clock date/time;"

Claims 1, 16, and 31 – 34, have been amended to make it more clear that VAR Value is defined as a "Variable Value;"

Claims 1, 11 – 15, 26- 30, 32, 33, 36 and 38, have been amended to make it more clear that EAV is defined as an "Eligible Adjusted Variable Value;"

Claims 12 and 27, have been amended to make it more clear that DV is defined as a "Dichotomous Variable;"

Claims 13, 14, 15, 28, 29, 30 and 36, have been amended to make it more clear that NNT is defined as a "Number Needed to Target;"

Claims 13, 14, 15, 28, 29, and 30, have been amended to make it more clear that RA is defined as "Resource Allocation;" and

Claims 16, 31, 32 and 33, have been amended to make it more clear that AdjVar Values is defined as "Adjusted Variable Values."

Claims 29 and 30 has also been amended to insert a --;-- after "(NNT)".

Claim 30 has been amended to add --and-- after "segment".

The International Preliminary Examining Authority has determined that Claims 1 – 38 lack an inventive step under PCT Article 33(3) as being obvious over Schloss et al. (U.S. Patent No.: 5,692,125). The Examining Authority takes the position that Schloss et al. schedules tasks based on relative start times and end times in relation to other tasks (cohort time). The events are scheduled (CCT) and checked to make sure certain conditions associated with the events are met. Dynamic conditions (UOA-ID) are stored in association with the events, which are checked before performance. This checking (Adjusted Variable Values) occurs between time of scheduling and performance time in a period known as "prepare to perform times." Templates are used to schedule event groups made up of events of common type (grouping by

type/Grouper). The tool is implemented using a computer system. The International Preliminary Examining Authority also takes the position that Schloss et al. does not teach this method and system applied to the specific applications of marketing, trademarks, evaluating web pages, warranties etc. It is the view of the International Examining Authority that it would have been obvious to apply the methodology and system of Schloss et al. to the other applications in order to increase the marketability of the tool to other industries, this increasing the consumer base able to use the tool.

The Applicant respectfully submits that Schloss et al. provides a system and method for computer *scheduling of events and event groups* that allows a scheduler to schedule events at a specific time and to account for changing external data and conditions that occur between the schedule time and an event performance time. The time interval between a first and a second event ("Event group" being defined as one or more events and collectively termed "templates" which are based upon "protocols" which are defined as a logical sequence of events and upon standard rules from a "domain expert" and can theoretically vary in duration from zero to infinity. The method uses "fixed conditions" (known prior to the initial scheduled time) and "dynamic conditions" (known after the initial scheduling time) to determine the exact duration of the time interval between the "legal start date" of the first event and the date of the second event or subsequent events. The method then uses this information to automate the potential date of a scheduled event. *One premise of the Schloss et al. method is that the "protocols" used, which are based upon "content experts," are correct for the particular schedule or task to be performed.*

In contrast, the present invention provides information about resource use (projected and actual) based upon real or desired changes in demand ( as captured by VAR per fixed time segments) in a defined population (Based on Type or Grouper). Thus, the present application is used to determine if the "protocols" for resource allocation are correct and if not, the method is used to determine new and optimized protocols. In this way the method and system of the present invention, at the most, may be related to the system and method taught in the Schloss et al. reference in that the method and system of the present application can be used to determine if the protocols of the task(s) being scheduled by Schloss et al. are optimized or proper for the given

task.

Accordingly, the method and system of Schloss et al. is used to schedule events and is based on the fact that the protocols are proper to achieve a specific purpose whereas the method and system of the *present application operates to determine if the protocol is correct to achieve a specific purpose*. Further, the system and method of the present application does not perform any “time interval” recalculation during a “prepare to perform time” nor does it perform any event rescheduling to determine a new performance time. As illustrated in Schloss et al., in the medical example (col 3., lines 59 – 62): “give 2 aspirins daily for 4 days and on the fifth day apply a cold compress. This protocol could be designed by a health care provider to treat tendinitis.” The subject application provides a method and system to test the validity or truth of this protocol in regards to a resource use outcome. For example, one defined population of tendinitis could be those with tendinitis that took 1 aspirin daily for 2 days and another could be an equivalent defined population with tendinitis that took 2 aspirin daily for 4 days. The results could be that the former had the optimal resource use outcome. Given this new “truth” about the optimal protocol for tendinitis developed or determined by the method and system of the subject application, the method and system of Schloss et al. could then be used for scheduling the performance time.

The Applicant also respectfully submits that the cited reference does not teach or render obvious the subject invention. It is well settled that **every limitation** in a claim must be taken into account. Referring to independent Claims 1 - 16, the method includes the steps of identifying sets of information wherein each set includes a UOA-ID (particular Unit of Analysis), a CCT (clock or calendar time) and a VAR Value (a variable value); calculating an eligibility score for each UOA-ID for each time segment; and calculating an Eligible Adjusted Variable Value. As used in the present application, the UOA refers to the unit of analysis which is the basic or minimum analytical unit that is to be examined and the UOA-ID means the particular individual UOA entity involved in the study. The International Preliminary Examining Authority has determined that for the method and system of Schloss et al., the UOA-ID would correspond to “dynamic conditions” which are checked between “the time of scheduling and the prepare to perform” time with the goal of generating a new scheduled time. The International

Preliminary Examining Authority, however, does not identify any VAR Value or how an Eligible Adjusted Variable Value can be or should be calculated when the duration of each time segment is fixed by the investigator and the VAR and Eligibility Adjusted Variable Value is inserted within these fixed length time segments. Accordingly, Schloss et al. does not teach or render obvious the claimed method and the Applicant is unable to find any motivation, teaching or suggestion of modifying Schloss et al. to arrive at the claimed composition of the subject application. Such motivation cannot come from the Applicant's own specification.

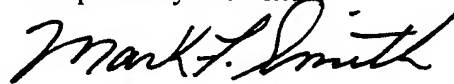
As stated by the International Preliminary Examining Authority "Schloss et al. does not teach this method and system applied to specific applications of marketing, trademarks, evaluating web pages, warranties, etc." The Applicant respectfully submits that the recognition that the method and system of the present application can or should be used for various applications and such uses are part of the inventive step of the system and method of the present application. The Applicant further submits that such uses require a method and a system that can be used to evaluate if a protocol is proper or optimized for an event. This function is not performed by the system and method of Schloss et al. and there is no suggestion or teaching that would motivate one to modify Schloss et al. along the lines of the present application.

In view of the foregoing, the method and system of the present application does possess an inventive step under PCT Article 33(3) and is not made obvious in view of Schloss et al. Accordingly, the rejection of claims 1- 38 should be withdrawn.

In view of the foregoing remarks, it is respectfully submitted that all of the Claims now pending are allowable over the art of record. Reconsideration of all claims now in this application is respectfully requested.

July 23, 2003  
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Respectfully submitted,



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## **CLAIMS**

### **(Replacement Pages)**

1. A method of analyzing resource allocation comprising the steps of:  
identifying sets of information wherein each set of information  
5 includes a identification of a particular Unit Of Analysis (UOA-ID), a  
calendar clock date/time (CCT), and a Variable Value (VAR Value);  
grouping each UOA-ID into an appropriate Type;  
identifying a Start Time;  
forming at least one Cohort time segment based on the Start Time;  
10 placing the UOA-ID into the appropriate time segment;  
calculating an eligibility score for each UOA-ID for each time  
segment;  
calculating an Eligible Adjusted Variable Value (EAV); and  
generating an Output Expression.  
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2. The method of Claim 1 further comprising the step of transforming the  
Output Expression from expressed in Cohort time segments to being  
expressed in calendar clock date/time (CCT) segments.
- 20 3. The method of Claim 1 wherein said method is performed using a  
system comprising a central processing unit for implementing system  
software effective for performing the method.
4. The method of Claim 1 that is used for marketing applications.  
25
5. The method of Claim 1 that is used for trademark applications.

6. The method of Claim 1 that is used for evaluating web pages on the Internet.
- 5 7. The method of Claim 1 that is used for analyzing the effects of similar trademarks.
8. The method of Claim 1 that is used for warranty applications.
- 10 9. The method of Claim 1 that is used for health care applications.
- 15 10. The method of Claim 1 wherein said method is used for applications selected from the group consisting of warranty applications, actuarial applications, insurance applications, marketing and advertising applications, frequent use program applications, shopping card applications, trademark/trade dress/product design evaluation applications, web page applications, infringement applications, and health care applications.
- 20 11. The method of Claim 1 wherein an Output Expression is generated by the method comprising the step of calculating an Eligible Adjusted Variable Value (EAV) based on a summary metric for each particular Unit Of Analysis (UOA-ID) per Type.

12. The method of Claim 1 wherein an Output Expression is generated by the method comprising the steps of:
- determining a Dichotomous Variable (DV) per Type per time segment;
- calculating an Eligible Adjusted Variable Value (EAV) summary metric for all particular Units Of Analysis (UOA-IDs) per Type per time segment; and
- calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment.
13. The method of Claim 1 wherein an Output Expression is generated by the method comprising the steps of:
- determining a Return On Resource Allocation (RORA);
- determining an Outcome;
- calculating a Number Needed to Target (NNT);
- calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and
- calculating the maximum available Resource Allocation (RA) per particular Units of Analysis (UOA-ID) per time segment.

14. The method of Claim 1 wherein an Output Expression is generated by the method comprising the steps of:  
determining a Resource Allocation (RA);  
determining an Outcome;  
5 calculating a Number Needed to Target (NNT);  
calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and  
calculating a Return On Resource Allocation (RORA) per Unit of Analysis (UOA-ID) per time segment.

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15. The method of Claim 1 wherein an Output Expression is generated by the method comprising the steps of:  
determining a Return On Resource Allocation (RORA);  
determining a Resource Allocation (RA);  
15 calculating a Number Needed to Target (NNT);  
calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and  
calculating an Output per particular Unit of Analysis (UOA-ID) per time segment.

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- 5
16. A method for analyzing resource allocation using a plurality of sets of information, the method comprising the steps of:
- for each set of information, identifying a particular Unit Of Analysis (UOA-ID), a Type, a Calendar Clock Date/Time (CCT), and a Variable Value (VAR Value);
- grouping each UOA-ID into an appropriate Grouper;
- identifying a Start Time;
- identifying a time segment duration;
- forming time segments based on the Start Time;
- 10 adjusting and standardizing each VAR Value to create Adjusted Variable Values (AdjVAR Values);
- placing each AdjVAR Value into the appropriate time segment;
- calculating an eligibility score for each UOA-ID; and
- generating an Output Expression.
- 15
17. The method of Claim 16 further comprising the step of transforming the Output Expression from expressed in Cohort time segments to being expressed in Calendar Clock Date/Time (CCT) segments.
- 20
18. The method of Claim 16 wherein said method is performed using a system comprising a central processing unit for implementing system software effective for performing the method.
- 25
19. The method of Claim 16 that is used for marketing applications.

- 5
20. The method of Claim 16 that is used for trademark applications.
21. The method of Claim 16 that is used for analyzing the effects of similar trademarks.
22. The method of Claim 16 that is used for warranty applications.
23. The method of Claim 16 that is used for health care applications.
- 10 24. The method of Claim 16 that is used for Internet applications.
- 15 25. The method of Claim 16 wherein said method is used for applications selected from the group consisting of warranty applications, actuarial applications, insurance applications, marketing and advertising applications, frequent use program applications, shopping card applications, Internet applications, trademark/trade dress/product design evaluation applications, infringement applications, and health care applications.
- 20 26. The method of Claim 16 wherein an Output Expression is generated by the method comprising the step of calculating an Eligible Adjusted Variable Value (EAV) based on a summary metric for each particular Unit Of Analysis (UOA-ID) per Type.
- 25

27. The method of Claim 16 wherein an Output Expression is generated by the method comprising the steps of:

determining a Dichotomous Variable (DV) per Type per time segment;

calculating an Eligible Adjusted Variable Value (EAV) summary metric for all particular Unit Of Analysis (UOA-IDs) per Type per

time segment; and

calculating an EAV Net Value per Type per time segment.

28. The method of Claim 16 wherein an Output Expression is generated by the method comprising the steps of:

determining a Return On Resource Allocation (RORA);

determining an Outcome;

calculating a Number Needed To Target (NNT);

calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and

calculating the maximum available Resource Allocation (RA) per particular Unit of Analysis (UOA-ID) per time segment.

29. The method of Claim 16 wherein an Output Expression is generated by the method comprising the steps of:  
determining a Resource Allocation (RA);  
5 determining an Outcome;  
calculating a Number Needed To Target (NNT);  
calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and  
calculating the Return On Resource Allocation (RORA) per particular  
10 Unit Of Analysis (UOA-ID) per time segment.
30. The method of Claim 16 wherein an Output Expression is generated by the method comprising the steps of:  
determining a Return On Resource Allocation (RORA);  
15 determining a Resource Allocation (RA);  
calculating a Number Needed To Target (NNT);  
calculating an Eligible Adjusted Variable Value (EAV) Net Value per Type per time segment; and  
calculating an Output per particular Unit Of Analysis (UOA-ID) per  
20 time segment.

31. A method of analyzing the effects of similar trademarks comprising the steps of:

identifying a set of information, each set comprising a Unit of Analysis (UOA), a particular Unit Of Analysis (UOA-ID), a Type, a calendar clock date/time (CCT), and a Variable Value (VAR Value);

grouping each UOA-ID into an appropriate Types;

identifying a Start Time;

forming time segments based on the Start Time;

adjusting and standardize each VAR Value to create Adjusted Variable Values (AdjVar Values);

sorting and placing each AdjVAR Value into the appropriate time segments;

calculating an Eligibility Score for each UOA-ID;

calculating an Eligible Adjusted Variable Value EAV for each time segment;

generating an Output Expression; and

analyzing the Output Expression to evaluate trademark perception.

32. A method of analyzing and evaluating resource allocation for the health care industry comprising the steps of:
- 5 identifying a set of information, each set comprising a Unit Of Analysis (UOA), a particular Unit Of Analysis (UOA-ID), a Type, a calendar clock date/time (CCT), and a Variable Value (VAR Value);
- grouping each UOA-ID into an appropriate Grouper;
- organizing each UOA-ID within each Grouper by succeeding CCT;
- identifying a Start Time;
- 10 forming time segments based on the Start Time;
- adjusting and standardize each VAR Value to create Adjusted Variable Values (AdjVAR) Values;
- sorting and placing each AdjVAR Value into the appropriate time segments;
- 15 calculating an Eligibility Score for each UOA-ID;
- calculating an Eligible Adjusted Variable Value (EAV) for each time segment; and
- generating an Output Expression showing trends in health care for use in evaluating resources allocation.

33. A method of allocating resources for use in marketing comprising the steps of:
- 5 identifying a set of information, each set comprising a Unit Of Analysis (UOA), a particular Unit Of Analysis (UOA-ID), a Type, a calendar clock date/time (CCT), and a Variable Value (VAR Value);
- grouping each UOA-ID into an appropriate Grouper;
- organizing each UOA-ID within each Grouper by succeeding CCT;
- identifying a Start Time;
- 10 forming time segments based on the Start Time;
- adjusting and standardize each VAR Value to create Adjusted Variable Values (AdjVAR) Values;
- sorting and placing each AdjVAR Value into the appropriate time segments;
- 15 calculating an Eligibility Score for each UOA-ID;
- calculating an Eligible Adjusted Variable Value (EAV) for each time segment; and
- generating an Output Expression showing trends for use in evaluating resource allocation for marketing.

34. A system for use by a user in analyzing resource allocation comprising:
- 5 a central processing unit for operating software effective for performing the method of:
- identifying sets of information wherein each set of information includes a particular Unit Of Analysis (UOA-ID), a calendar clock date/time (CCT), and a Variable Value (VAR Value);
- grouping each UOA-ID into an appropriate Type;
- 10 identifying a Start Time;
- forming at least one Cohort Time segment based on the Start Time;
- placing the VAR Value into the appropriate time segment;
- calculating an eligibility score for each UOA-ID for each time segment;
- 15 calculating an Eligible Adjusted Variable Value (EAV); and
- generating an Output Expression.
35. The system of Claim 34 wherein said method is used for applications selected from the group consisting of warranty applications, actuarial
- 20 applications, insurance applications, marketing and advertising applications, frequent use program applications, shopping card applications, Internet applications, trademark/trade dress/product design evaluation applications, infringement applications, and health care applications.

**36.** An Output Expression comprising a representation showing Eligible Adjusted Variable Value (EAV) trends of a particular Population, said trends are expressed in Cohort time segments.

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**37.** An Output Expression comprising a representation showing Number Needed To Target (NNT) trends of a particular Population, said trends are expressed in Cohort time segments.

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**38.** An Output Expression comprising a representation showing Eligible Adjusted Variable Value (EAV) Net Value trends of a particular Population, said trends are expressed in Cohort time segments.